wherein the first data stream has synchronization data; and

- a transmitter operable to transmit the m-level VSB modulated signal and the n-level VSB modulated signal;

said receiving apparatus comprising:

- a demodulator operable to demodulate the m-level VSB modulated signal to the first data stream and demodulate the n-level VSB modulated signal to a demodulated data stream,

wherein the demodulated data stream is reproduced according to the synchronization data; and

- a trellis decoder operable to trellis decode the demodulated data stream to the second data stream.

20.   A signal transmission apparatus for transmitting a VSB modulated signal having information of a first data stream and a second data stream, the apparatus comprising:

- a trellis encoder operable to trellis encode the second data stream to produce a trellis encoded data stream;

- a modulator operable to modulate the first data stream, without being trellis encoded, to an m-level VSB modulated signal and modulate the trellis encoded data stream to an n-level VSB modulated signal, n being an integer larger than m,

wherein the first data stream has synchronization data; and

- a transmitter operable to transmit the m-level VSB modulated signal and the n-level VSB modulated signal.

21.   A signal receiving apparatus comprising:

- a receiver operable to receive a transmitted VSB modulated signal having information of a first data stream and a second data stream,

wherein the transmitted VSB modulated signal includes an m-level VSB modulated signal and an n-level VSB modulated signal, n being an integer larger than m, and the first data stream has synchronization data;

- a demodulator operable to demodulate the m-level VSB modulated signal to the first data stream without being trellis encoded, and to demodulate the n-level VSB modulated signal to a demodulated data stream,

wherein the demodulated data stream is reproduced according to the synchronization data; and

- a trellis decoder operable to trellis decode the demodulated data stream to the second data stream.

22. A signal transmission and receiving method for transmitting and receiving a VSB modulated signal having information of a first data stream and a second data stream, the method comprising a transmission method and a receiving method,

said transmission method comprising:

- trellis encoding the second data stream to produce a trellis encoded data stream;

- modulating the first data stream, without being trellis encoded, to an m-level VSB modulated signal and modulating the trellis encoded data stream to an n-level VSB modulated signal, n being an integer larger than m,

wherein the first data stream has synchronization data; and

- transmitting the m-level VSB modulated signal and the n-level VSB modulated signal;

said receiving method comprising:

- demodulating the m-level VSB modulated signal to the first data stream and demodulating the n-level VSB modulated signal to a demodulated data stream;

wherein the demodulated data stream is reproduced according to the synchronization data; and

- trellis decoding the demodulated data stream to the second data stream.

23. A signal transmission method for transmitting a VSB modulated signal having information of a first data stream and a second data stream, said method comprising:

- trellis encoding the second data stream to produce a trellis encoded data stream;

- modulating the first data stream, without being trellis encoded, to an m-level VSB modulated signal and modulating the trellis encoded data stream to an n-level VSB modulated signal, n being an integer larger than m,

wherein the first data stream has synchronization data; and

- transmitting the m-level VSB modulated signal and the n-level VSB modulated signal.

24. A signal receiving method comprising:

- receiving a transmitted VSB modulated signal having information of a first data stream and a second data stream,

wherein the transmitted VSB modulated signal includes an m-level VSB modulated signal and an n-level VSB modulated signal, n being an integer larger than m, and the first data stream has synchronization data;

- demodulating the m-level VSB modulated signal to the first data stream having synchronization data and not being trellis encoded, and demodulating the n-level VSB modulated signal to a demodulated data stream,

wherein the demodulated data stream is reproduced according to the synchronization data; and

- trellis decoding the demodulated data stream to the second data stream.